ABSTRACT OF THE DISCLOSURE

A system and method for data table multiplexing on a serial multiplex data (bit level) system is described. The present invention combines the benefits of previous systems with the capability to transfer large tables of data. The method used to transfer this data is a software data multiplexing protocol that utilizes the previous physical layer protocol and is capable of coexisting with previous systems. Multiple bit addresses are assigned functions such as address, data, and error detection. This establishes a data transfer frame that is used to multiplex data between a host and a module. Communication to and from the host is accomplished through the register map. The register map contains module setup information, software configuration settings, raw data, or summary data.